The Value and Potential of ERP

Office of Financial Management

Olympia, WA

20 March, 2008

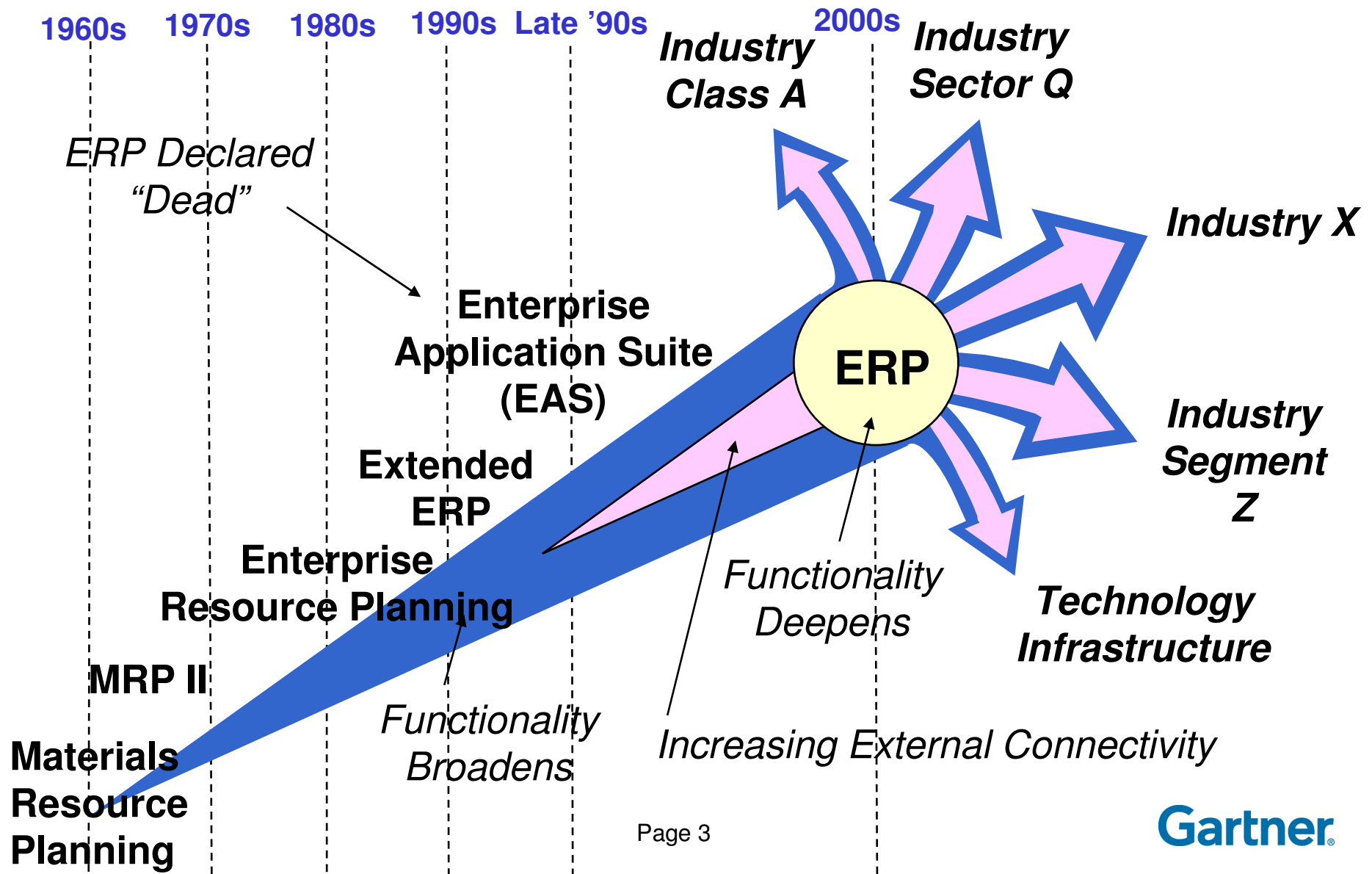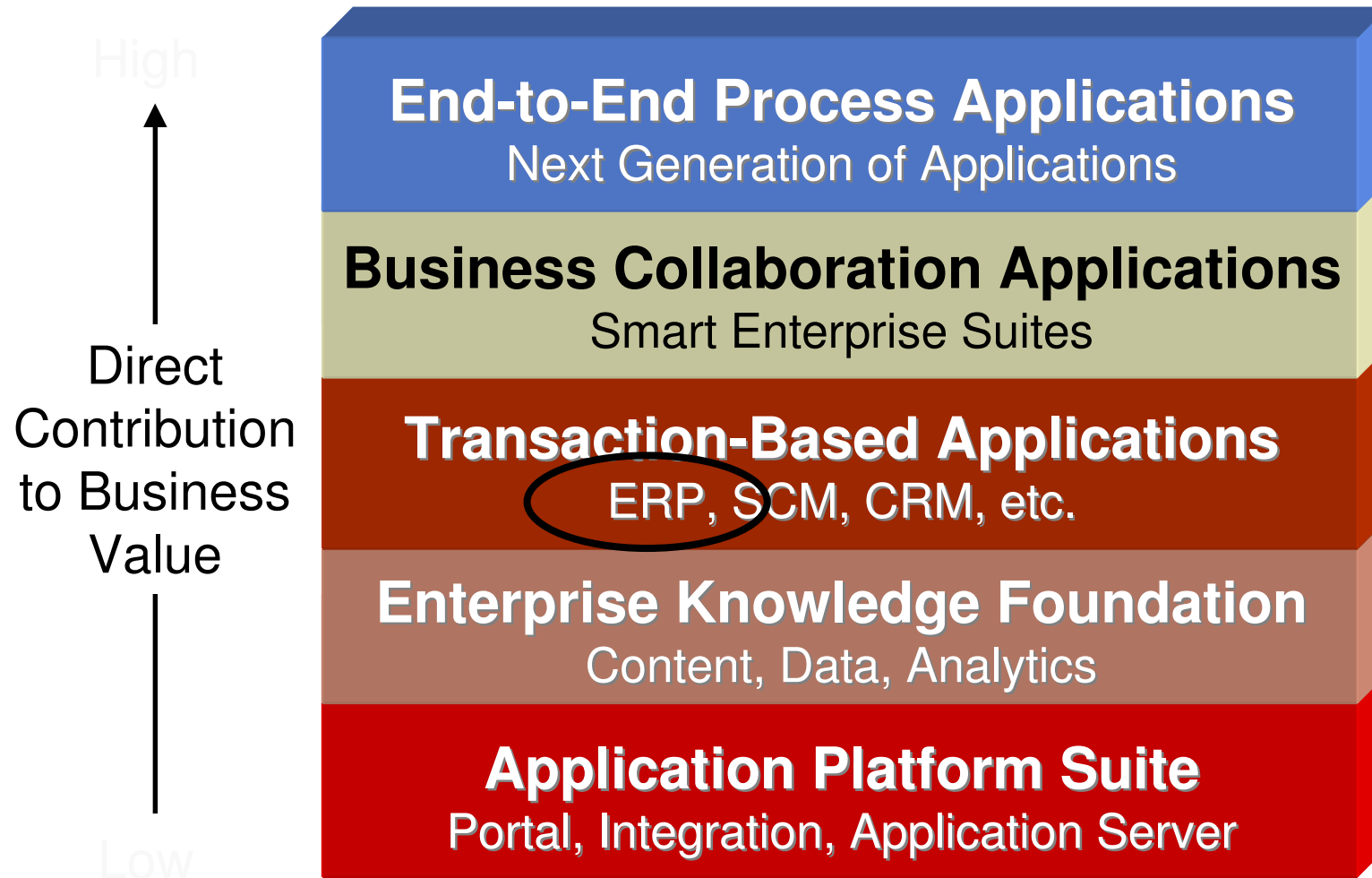Pat Phelan

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Discussion Topics

- History of ERP, where it came from

- Who is an appropriate candidate for ERP?

- ERP Risks

- Why is it difficult for Government to embrace ERP?

- Instance strategies

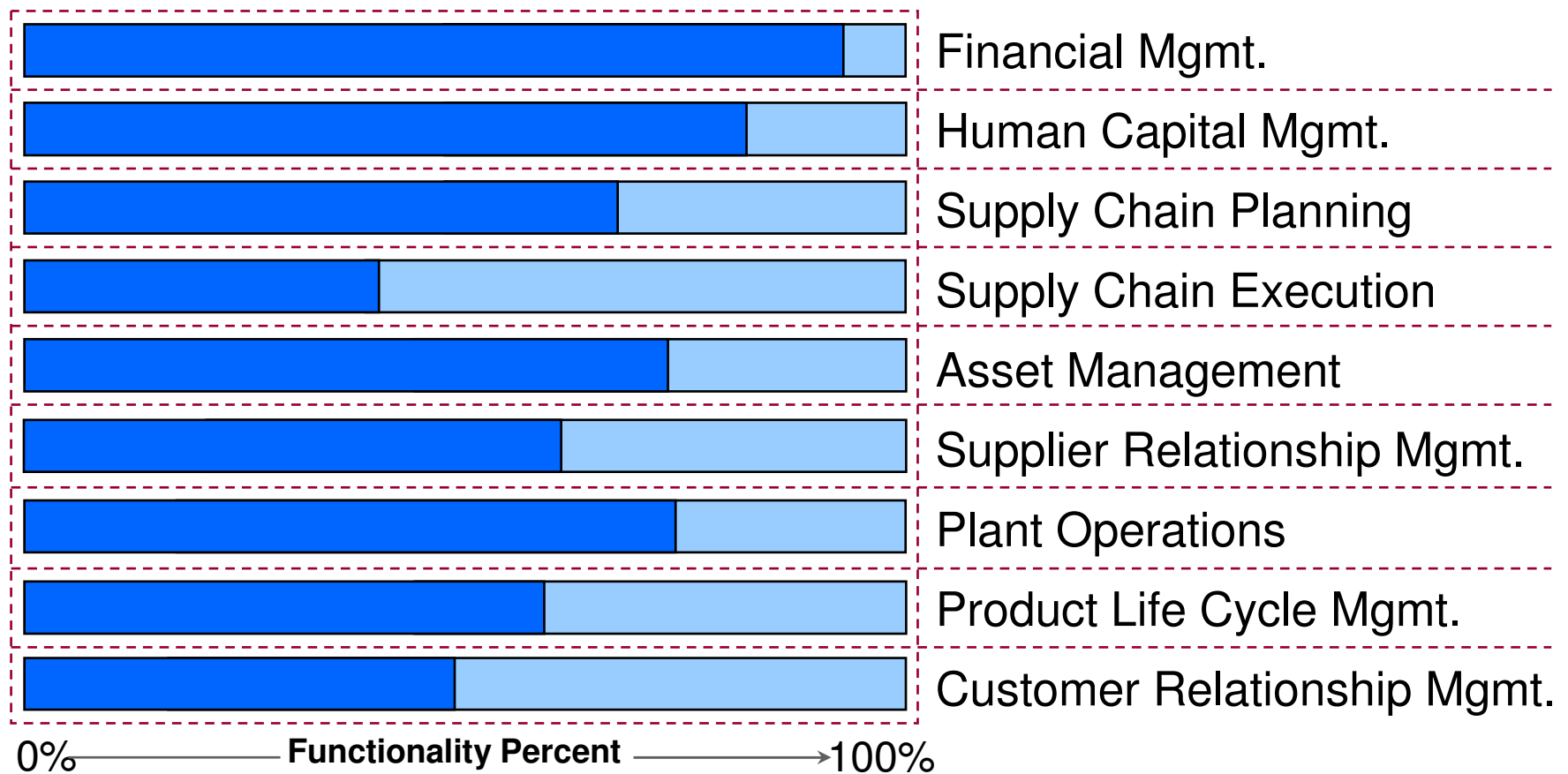- Build vs. Buy vs. Leverage existing SAP and historical systems

- ERP Lessons Learned

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History of ERP

Getting To ERP – A Little History

1960s 1970s 1980s 1990s Late '90s 2000s

Industry Class A

Industry Sector Q

Industry X

ERP Declared "Dead"

Enterprise Application Suite (EAS)

Extended ERP

Enterprise Resource Planning

ERP

Industry Segment Z

Functionality Deepens

Technology Infrastructure

MRP II

Functionality Broadens

Increasing External Connectivity

Materials Resource Planning

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The Business Application 'Stack'

Direct Contribution to Business Value (Low → High)

End-to-End Process Applications
Next Generation of Applications

Business Collaboration Applications
Smart Enterprise Suites

Transaction-Based Applications
ERP, SCM, CRM, etc.

Enterprise Knowledge Foundation
Content, Data, Analytics

Application Platform Suite
Portal, Integration, Application Server

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ERP Functional Breadth Scorecard

Financial Mgmt.

Human Capital Mgmt.

Supply Chain Planning

Supply Chain Execution

Asset Management

Supplier Relationship Mgmt.

Plant Operations

Product Life Cycle Mgmt.

Customer Relationship Mgmt.

0% ——— **Functionality Percent** ———→ 100%

■ **ERP Vendor**   □ **Best-of-Breed Vendor Combination**

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Application Software and Vendors Take a Radical Turn

Starting in ...	1970s	1997	2007
… The user requests:	An Application	An Application	Functionality, Industry Expertise
… The user can buy:	An Application	Applications as Services	Function-Level Business Services
…Applications are:	In-House	Outsourced	Anywhere
… The payment method is:	Buy	Rent	Buy, Rent, Pay a Usage Fee
... Your vendors provide:	Single Applications	Packages, ERP, Process Models	SOA, Fusion, Industry Focus

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Who is an Appropriate Candidate for ERP?

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ERP Objectives

- Leverage vendor development

- Get out of the software business

- Leverage "best practices"

- Common database and data definitions

- Leverage packaged integration

- Enable a business transformation

- Deeper and broader support and documentation
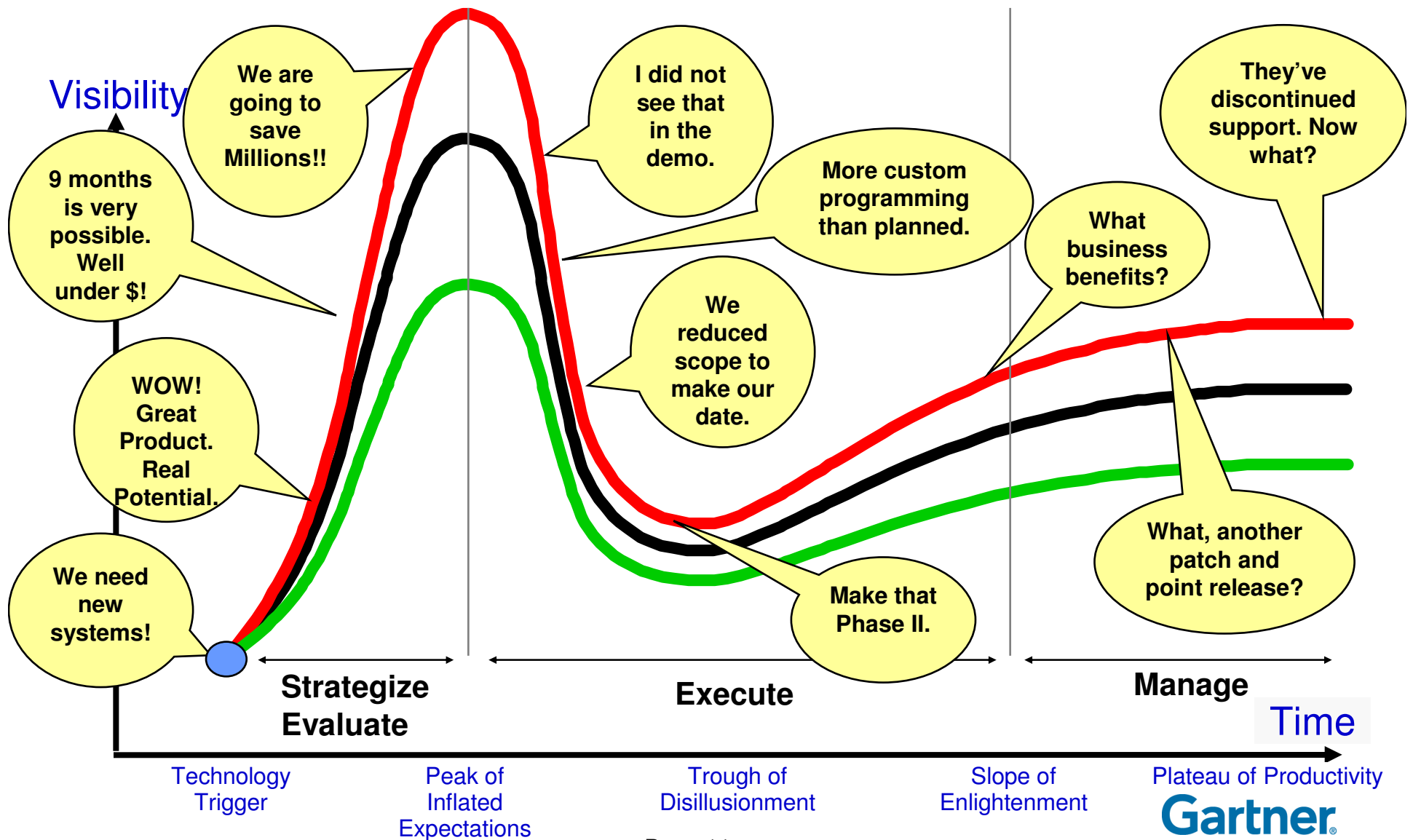
- Leverage new technology

- Achieve compliance

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ERP Risks

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ERP Risks Have Changed

Project Impact on Enterprise Performance

High

Top Risks Today
- External Relationships
- Ability to Collaborate
- Multivendor Solutions
- Virtual Teams

Top Risks Five Years Ago
- Resources
- Technology
- Knowledge Transfer
- Scope Control

Low

Low   **Multiproject Dependencies**   High
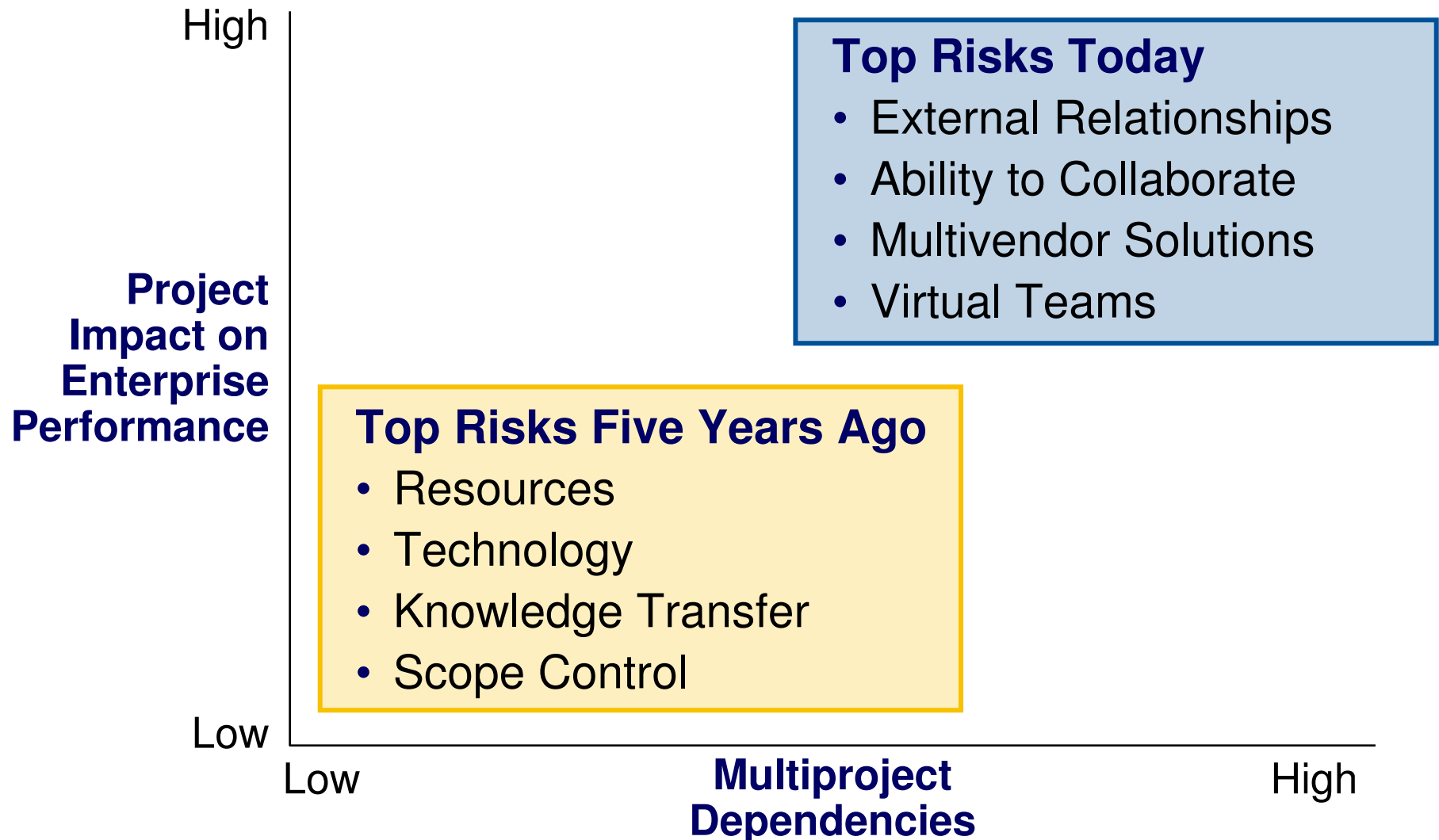
Challenge: Early detection and resolution of problems **Gartner.**

Implementation Reality

ERP Success Metrics Often Miss the Mark

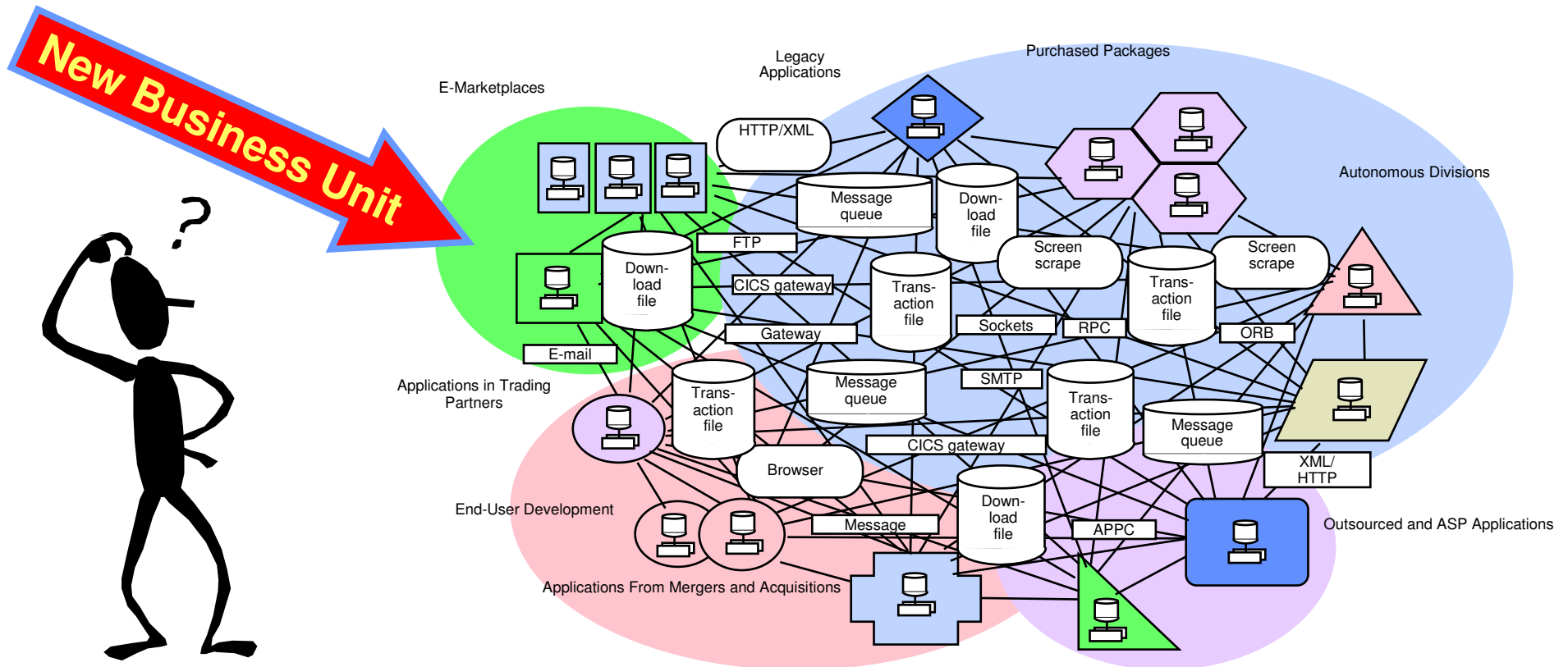**Success is typically defined as being on time and on budget.**

When measuring success, also look at whether program objectives are achieved.

Project
Planning
& Launch

**Make this Date
Hold the Budget
Be a Success!**

Well Known
Activities

Unknown Downstream Impacts
(We don't know what we don't know)

Eliminated Tasks

What you don't know, can hurt you.
Downstream Impacts caused by:
Custom Programming
Integration Challenges
Business Events

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Why is it Difficult for Government to Embrace ERP?

Instance Strategies

New Business Unit

E-Marketplaces

Legacy Applications

Purchased Packages

Autonomous Divisions

HTTP/XML

Message queue

Down-load file

Screen scrape

Screen scrape

FTP

CICS gateway

Down-load file

Trans-action file

Sockets

RPC

Trans-action file

ORB

Gateway

Applications in Trading Partners

E-mail

Trans-action file

Message queue

SMTP

Trans-action file

Message queue

CICS gateway

XML/ HTTP

Browser

End-User Development

Message

Down-load file

APPC

Outsourced and ASP Applications

Applications From Mergers and Acquisitions

Complexity Is the Enemy of Adaptability

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Multiple Instances Highlight Organizational Barriers
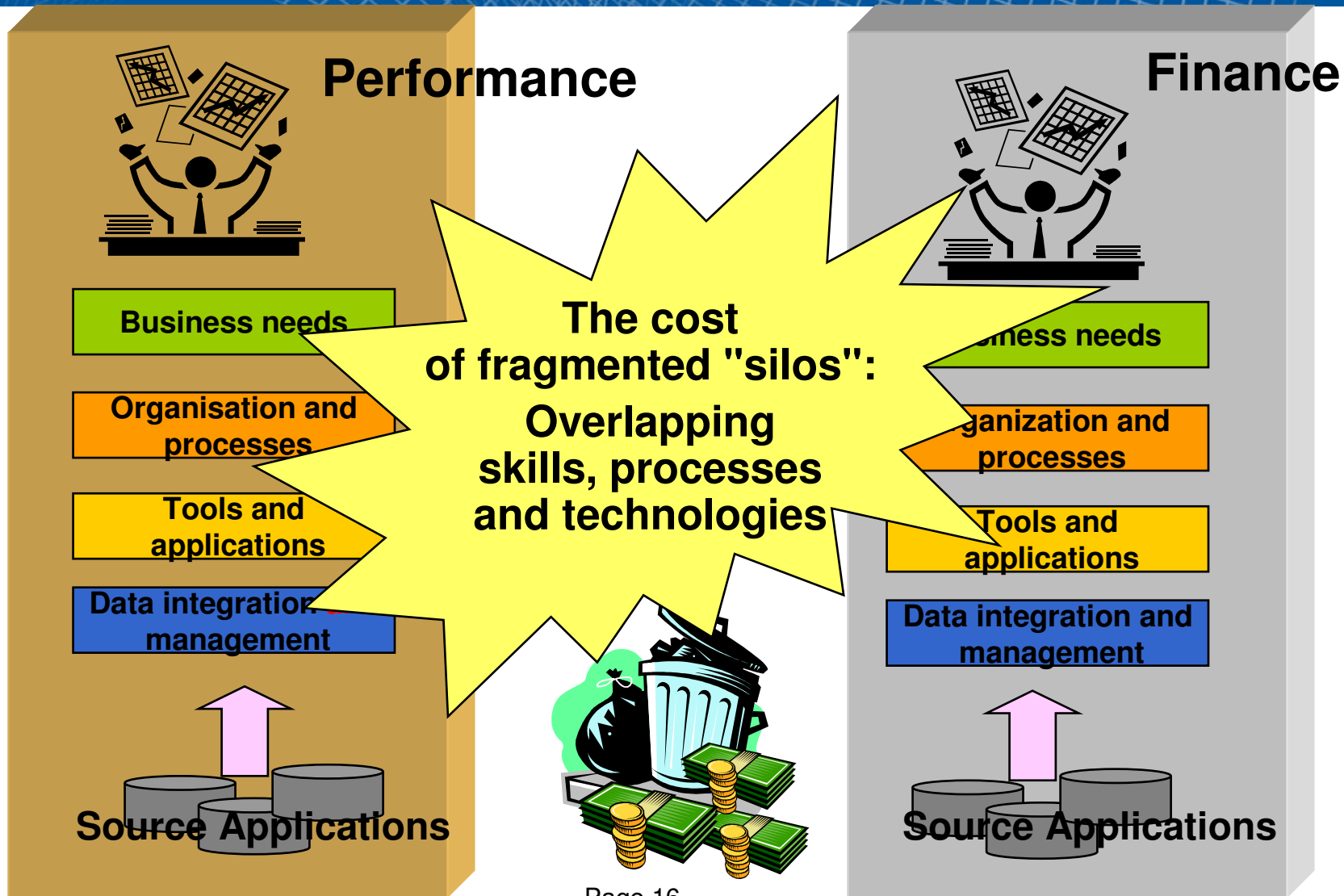
Performance

Finance

Business needs

Organisation and processes

Tools and applications

Data integration and management

Source Applications

Business needs

Organization and processes

Tools and applications

Data integration and management

Source Applications

The cost of fragmented "silos":
Overlapping skills, processes and technologies

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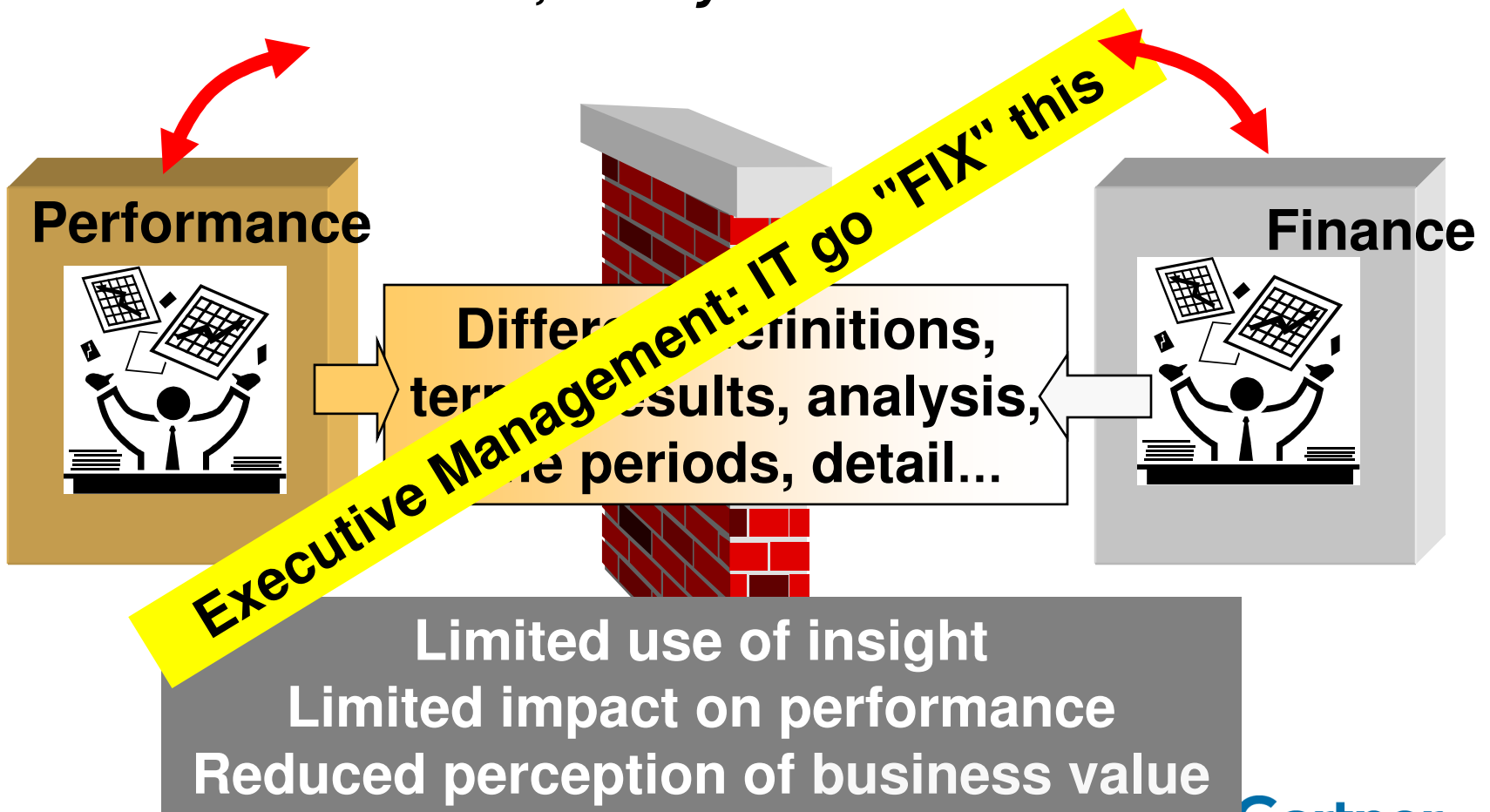
Managing Instances

Ring the bell and be a Total Cost of Ownership winner!

Full Life Cycle Deployment

Managed Diversity

Software Distribution

License Management

Packaging Changes

Inventory/ Discovery

Data/Settings Migration

Desktop Images/GUI

Page 18

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Scenario: Instance Rationalization

Legal and Regulatory Advisory Firm
Post Implementation Optimization

- Description

  - Multiple Instances with variations in configuration

  - Resources taxed to support production operations and apply upgrades to multiple versions

  - Faced with down time * 'N' as each instance goes through upgrade cut-over

- Lessons Learned

  - Reduce instances to the minimum number required for security and diversity

  - Rigorous adherence to configuration standards and guidelines

  - Enforce an approval process for variations, must pass rigorous justification criteria

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# Build Versus Buy Versus Leverage existing SAP and historical systems

Best of Breed or ERP?

Best of
Breed

ERP

General
Requirements

Unique/Industry
Requirements

The closer you
get to your
unique
requirements,
the more you
should allow
those
requirements
to drive the
application.

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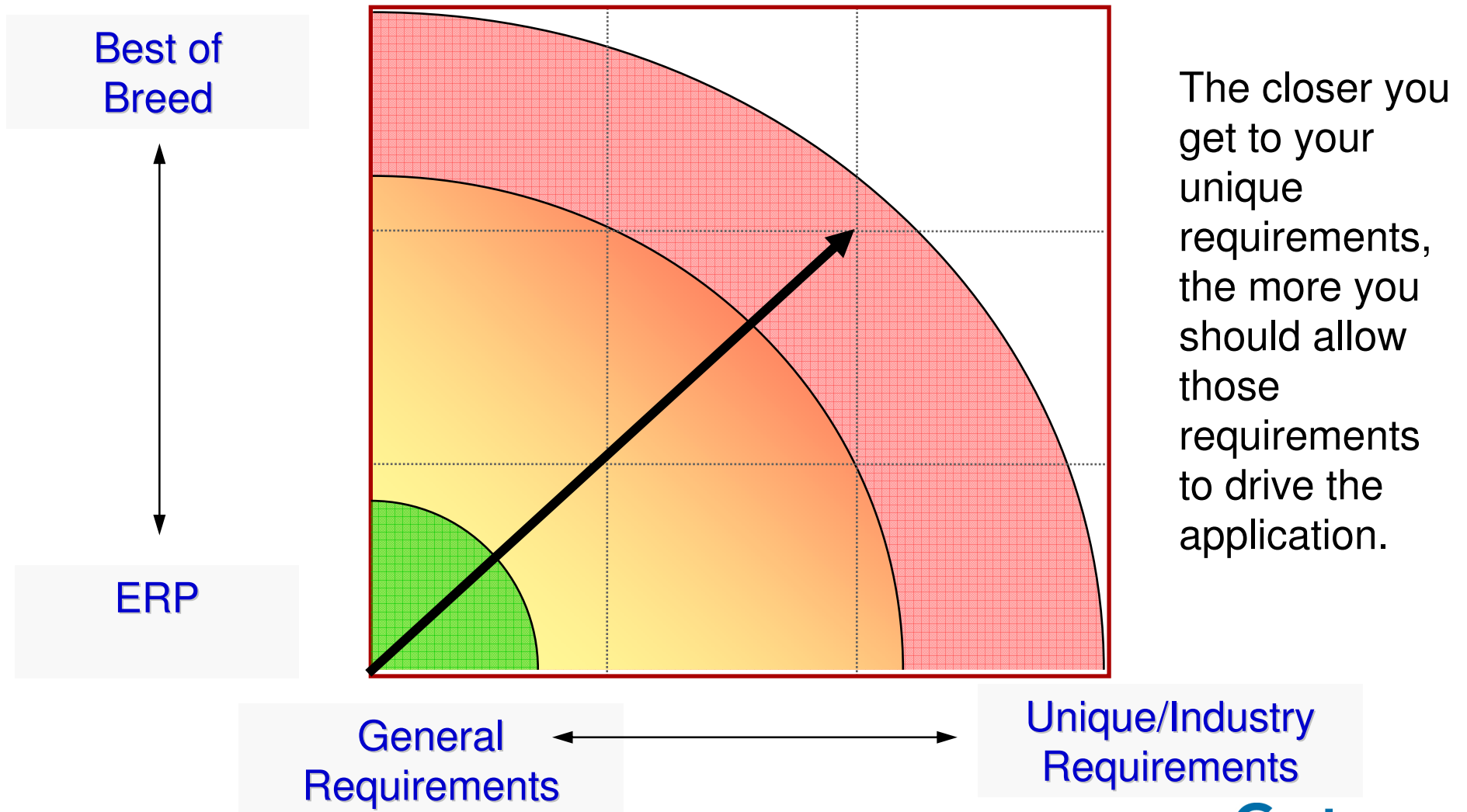
ERP: Fact vs. Fiction

ERP Orthodoxy   **ERP Reality**   **Best-of-Breed**
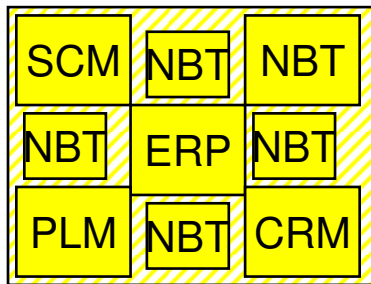
Outsource business application strategy to a single vendor
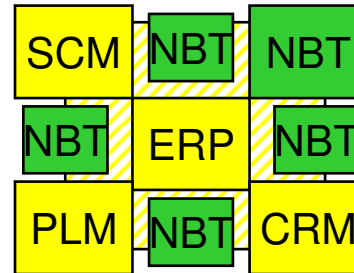
Outsource as much as possible to a single vendor without affecting competitiveness
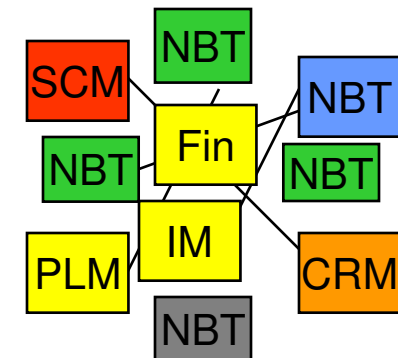
Customize based on a combination of best-of-breed and in-house development

ERP II is defined as an application and deployment strategy that expands out from traditional ERP functions to achieve integration of an enterprise's key, domain-specific internal and external collaborative, operational and financial processes.
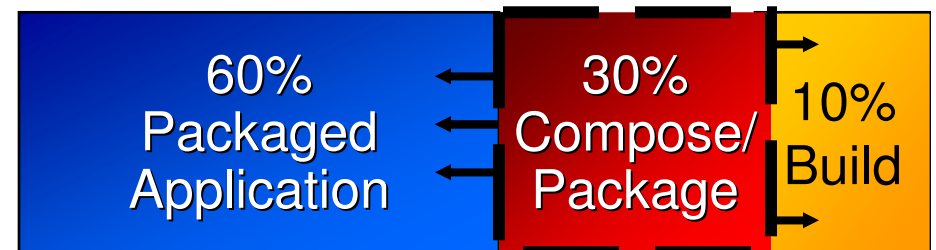
NBT = Next Big Thing

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Rebalancing the Process Portfolio: Blurring the Lines Between Buy and Build

Today's Typical Enterprise Portfolio

75% Buy Packaged Application	25% Build

The Portfolio of the Future

60% Packaged Application	30% Compose/ Package	10% Build

But These Solutions Don't Solve
It All …
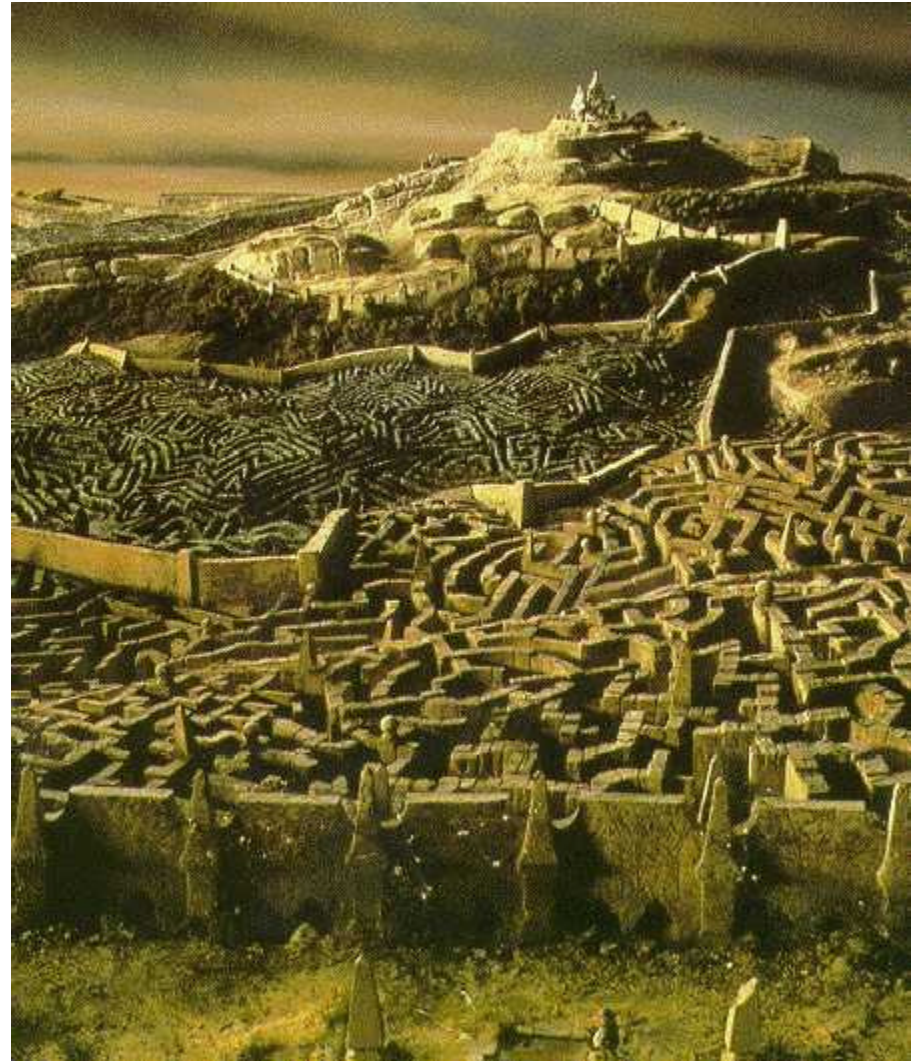Users Must Develop Software
to Cover Gaps — Not Flexible!

Packaged Composite Applications:

■ Enable flexibility in traditional areas of "build"

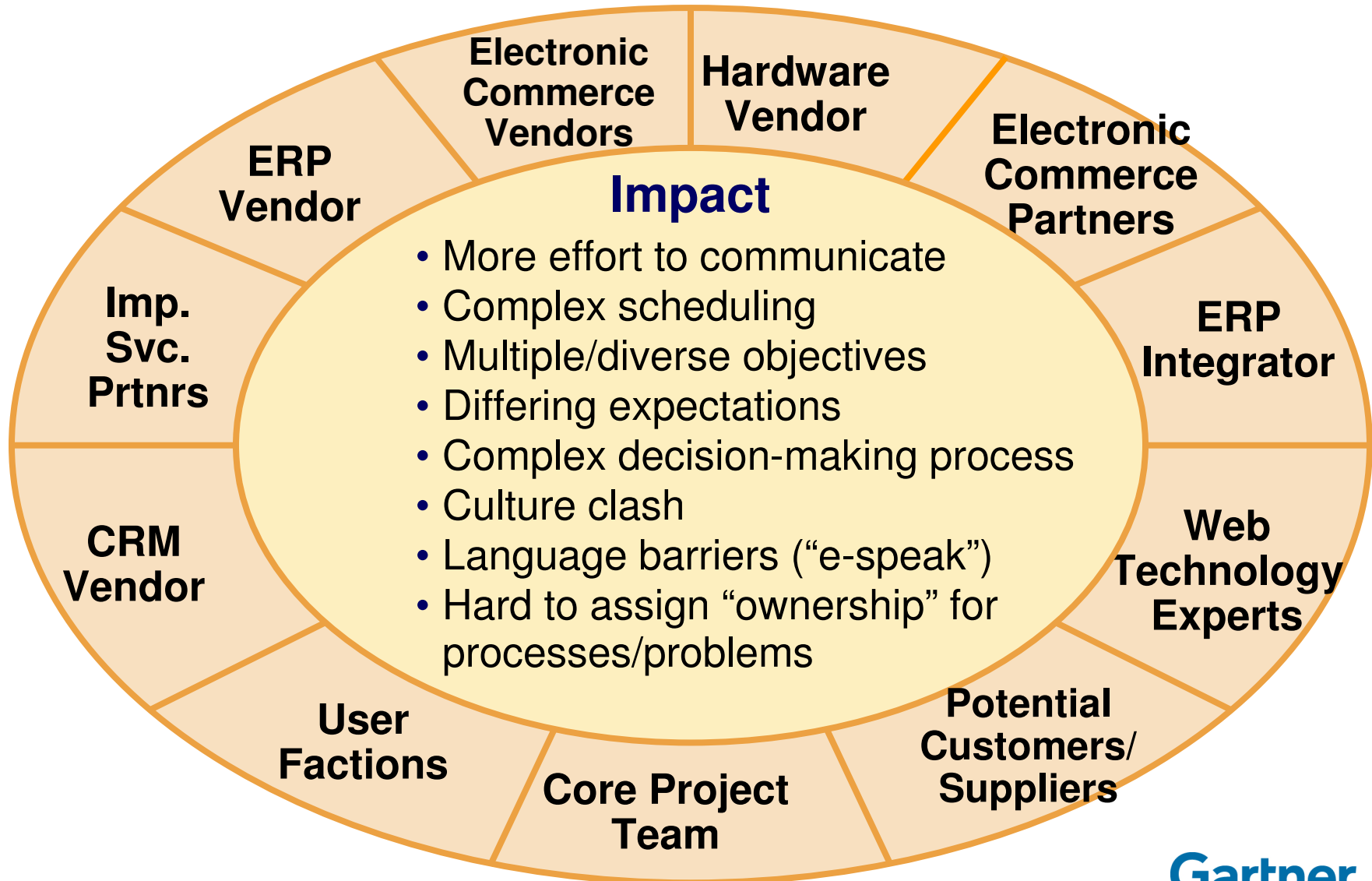■ Enable innovation through process flexibility

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ERP Lessons Learned

The 'Gotchas' of Application Implementation

1. Expectations are not managed and become inflated

2. Project delivery overshadows value delivery

3. Improper deployment strategies are selected

4. People issues are minimized

5. The context of the Life Cycle is not considered

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Numerous Business Partners Must Be Managed Effectively

Electronic Commerce Vendors

Hardware Vendor

Electronic Commerce Partners

ERP Vendor

ERP Integrator

Imp. Svc. Prtnrs

CRM Vendor

Web Technology Experts

User Factions

Core Project Team

Potential Customers/ Suppliers

Impact

- More effort to communicate
- Complex scheduling
- Multiple/diverse objectives
- Differing expectations
- Complex decision-making process
- Culture clash
- Language barriers ("e-speak")
- Hard to assign "ownership" for processes/problems

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Clarify Roles/Responsibilities if Multiple Parties Are Involved

Example: A Chef

Skills	Knowledge	Attributes
Technical Performance	*Business Acumen*	*Behaviors*

Skills	Knowledge	Attributes
1. Chopping	1. Seasonal demands	1. Problem solving
2. Measuring	2. Tools	2. Coordination
3. Mixing	3. Spices	3. Courtesy
4. Peeling	4. Staffing	4. Creativity
5. Kneading	5. Menu planning	5. Multitasking

+

Degree of Accountability, Authority, Responsibility

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Raise the Bar for System Integrator Requirements
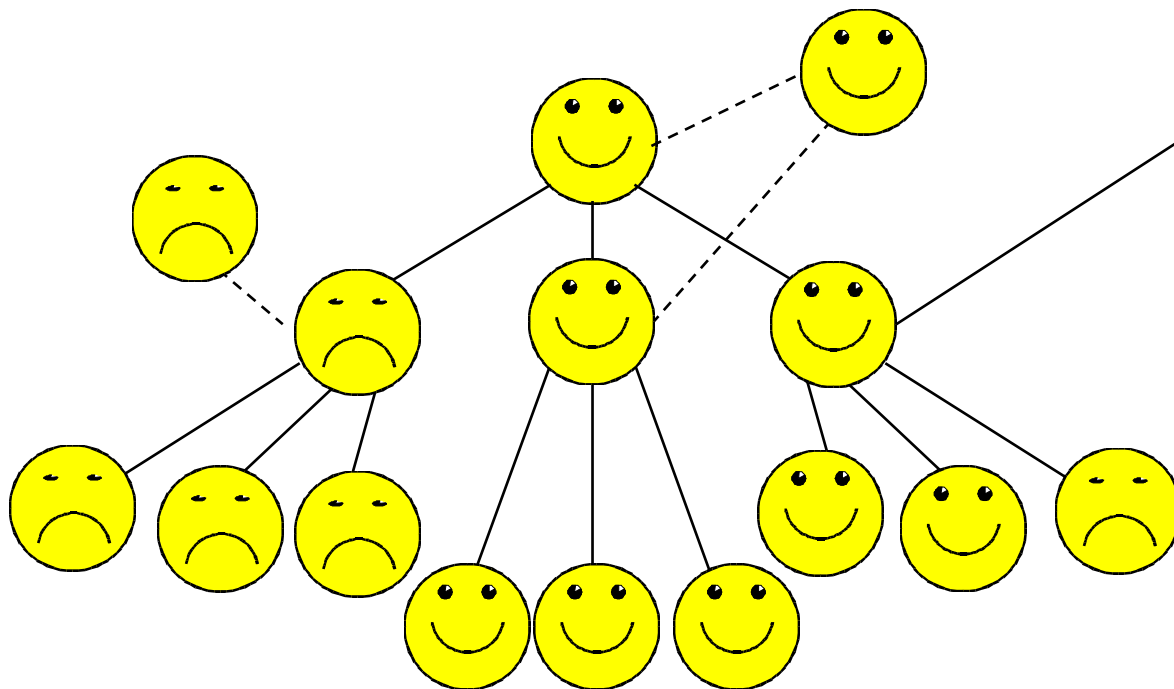
Traditional Consultant Staffing Model
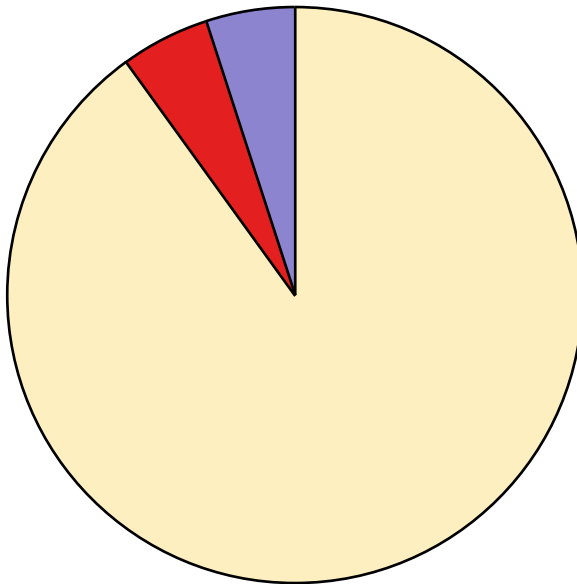
High-End Consultant Staffing Model
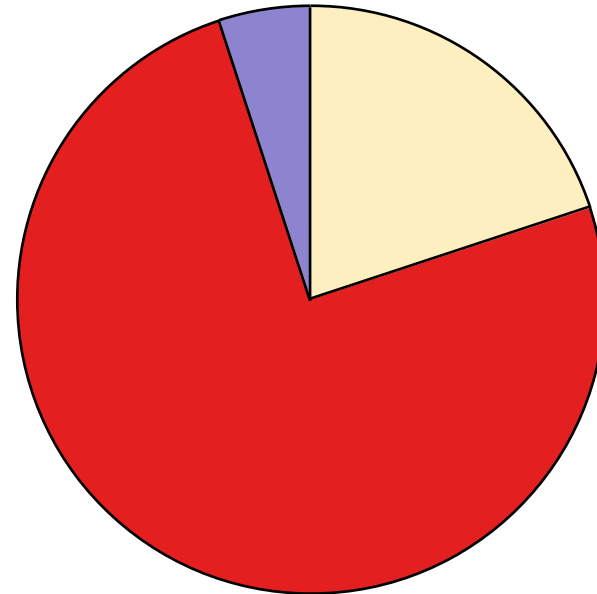
- 🟪 Strategy
- 🟥 Process Analysis
- 🟨 Package Configuration

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Projectwide Communication Requires More Effort at Enterprise Level

- Tell them, tell them and then tell them again
- Build and sustain ownership and commitment
- Use the grapevine to your advantage

And he told three friends, and so on, and so on…

Good **and** bad press has a ripple effect across the enterprise and business partners.

Use communication to build ownership and increase productivity, or ignore it and clean up the mess later.

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ERP Lessons Learned

- **Senior leader buy-in & active support are imperative**
- **Governance – Decision hierarchy must support rapid response to avoid stalling implementation**
- **Unique configuration needs minimize ability to gain efficiency**
- **Address both operational and management processes**
- **Structured organizational change efforts reduce resistance and improve willingness to work through start-up issues**

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ERP Lessons Learned, cont'd..

- **Data ownership** / **stewardship** / **quality assurance is a complicated issue**
- **Cutting testing effort due to timing** / **budget constraints costs more in the long run**
- Structured organizational change efforts reduce resistance, minimize FUD, and improve willingness to work through start-up issues
- It's not over until the interfaces are done
- Cutting testing costs more in the long run

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Use a Business Case to Add Value Throughout the Life Cycle

	Investment Life Cycle Phase		
	Investment Appraisal	**Project Execution**	**Benefits Harvesting**
Business Case Objective	Get project buy-in, approval and funding	Keep project on track	Achieve project payoff
Business Case Role	Inform & convince, develop collective ownership	Baseline reference for scope decisions	Measurement yardstick for auditing
Key Persons and Groups Involved	Executive sponsor, project owner, investment committee	Project manager, project steering committee	Business unit management, auditors

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From Project to Program:
The Life Cycle View

Typical Project Approach

Plan → Design/Develop → Test → Implement

- There is a clear end
- There is a discrete budget
- The team will assemble and then disband
- There is a clear ROI

Life Cycle Approach

Plan → Design/Develop → Test → Implement → Manage →

- You are never done
- Many activities started during the project continue
- ROI happens after the project stops
- The project budget is followed with budgets for support, improvement and upgrades
- Helps with long term planning and expectation setting

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Additional Information

Enterprise Resource Planning – Definition

- "Enterprise Resource Planning (ERP) is defined business strategies and enabling software that integrate manufacturing, financial and distribution functions to dynamically balance and optimize enterprise resources.

- ERP integrates all departments and functions across an enterprise onto *a single computing system* that can serve all those different departments' particular needs.

- Most ERP vendor solutions enable the flow of information across the organization, in end-to-end business processes, through a comprehensive set of interconnected modules.

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Key ERP Terminology

- **Installation** – physical loading of the ERP software onto the hardware, initiation of the data base, and possibly loading the user interface onto users' work stations.

- **Implementation** – a project that enables the ERP application for use across the enterprise. It includes:

  - Installation of the software, supporting hardware and infrastructure.

  - Business process design within the ERP.

  - Change management and communications regarding use of the new application.

  - Tailoring the ERP system for specific business processes.

  - Establishing roles and security for use of the application.

  - Testing, Training, Data conversion.

  - Cutover to use of the ERP.

- **Rollout** – systematic approach to deliver the implemented solution to the whole of the enterprise, likely to encompass many discrete cutovers. Synonym to "deployment."

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Key ERP Terminology

- **Tailoring** - changing the software ***or its settings*** to implement the chosen business processes. Techniques include configuration, modification, extension, and enhancement:

  - **Configuration** - making choices about how the software should operate and enabling the choices by creating or selecting values in the parameters of the ERP application.

  - **Enhancement** - writing additional code inside the ERP software environment and existing programs, at pre-defined user-exit points supported by the vendor.

  - **Extension** - writing additional code to add new functions and logic to an ERP application, outside of the existing programs but inside the ERP software development environment.

  - **Modification** - changing source code, dictionary objects, screens, or other application objects from their vendor-delivered, initial state. *This implementation option is reserved for the most extreme cases, is not supported by the vendors, and should be justified with a hard business case.*

- **Bolt-on** - *vendor-supported* interface between the ERP and an external application.

- **Methodology** - the "tried-and-true" successful practices for implementation.

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Acronyms..

- CRM   Customer Relationship Management
- ERP   Enterprise Resource Planning
- FIN   Finance
- FUD   Fear, Uncertainty and Doubt
- GUI   Graphical User Interface
- NBT   New Business Transaction
- PLM   Product Lifecycle Management
- ROI   Return on Investment
- SCM   Supply Chain Management

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